

“Project PASSED (Push-up, Anaerobic, Sit-up, and Squat Exercise Daily) as Enhancement Activity at Home to Improve Learners' Muscular Strength and Endurance”

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Abstract: *The main objective of this study is to improve the muscular strength and endurance of the learners through ‘Project PASSED (Push up, Anaerobic, Sit up and Squat Exercise Daily)’. The scope is confined to 15 male and female Bachelor of Physical Education College Students of Colegio de San Gabriel Arcangel, enrolled in the academic year 2021-2022. Furthermore, the purpose of this study is to identify students' physical activity skills using PROJECT PASSED. Doing these, the researchers will determine the level of fitness before and after using the enhancement activity. Concretely, this study will be using pretest-posttest as a procedure. The researchers will use google meetings to monitor students' daily exercises and log exercise for them to be more productive and motivated. Enhancing muscular strength and endurance is necessary for the learners especially nowadays that we're living and studying in the midst of a pandemic. Regular exercise and physical activity promote strong muscles and bones, and it improves respiratory, cardiovascular, and overall health. However, the researchers successfully rejected the null hypothesis and concluded that there is significant difference between pretest and posttest of the respondent using PROJECT PASSED as an enhancement activity at home to improve the learners' muscular strength and endurance. It is necessary to plan a program wherein learners can engage a physical activity in the new normal setting and make physical activity opportunities more locally accessible.*

Keywords – anaerobic, enhancement activity, exercise daily, Push up, muscular strength endurance, sit up, squat

INTRODUCTION

Being physically active may have a good impact on both our physical and mental health, as well as our ability to complete activities and duties in our everyday life. Many people nowadays find it difficult to be physically active, especially since the government has implemented social distancing and the closure of recreational establishments such as gyms, studios, courts, parks, and athletic facilities where people can engage in moderate to vigorous physical activities.

Exercising helps many aspects of our bodies and lives. Most significantly, consistent physical activity can enhance your overall well-being. Exercising or engaging in physical activity can enhance our health and lower our chance of acquiring a variety of ailments. It may also have both immediate and long-term health advantages, particularly now that we need to strengthen our immune systems in response to the COVID-19 outbreak.

To put this into context, in this learning competency: Engages in moderate to vigorous physical activities for at least 60 minutes a day in and out of school PE10PF-1lc-h-45. We focused on selected Grade 10 students from Colegio De San Gabriel Archangel in San Jose Del Monte, Bulacan, who are lacking in muscular strength and endurance. We all have observed that students in both public and private schools are frequently involved in this problem and are not given adequate attention. Additionally, they do not prioritize exercise since they believe it is unimportant. As a result, students are constantly falling behind when it comes to physical activity. In order for them to be helped. Even though there are many obstacles, We will be using a physical fitness test at home. According to WHO (World Health Organization) research “Filipino youths are the second most physically inactive in the world next to South Korea. The country got 93.4 percent in terms of ‘physical inactivity prevalence’.” and according to their study “81 percent (or four out of five) of teens aged between 11 to 17 in 2016 did not reach the WHO recommended minimum of 60 minutes of moderate to vigorous intensity physical activities.”

This only shows that the majority of the Filipino teens are physically inactive, and to be under an obligation to improve their level of fitness. It is important to teach the younger ones to learn how to take care of themselves as well as their physical health for them to be productive, healthy, and functional as they grow up. It is inevitable for a man to catch a disease whether it is contagious or not, that’s why preventing it is necessary.

However, as cited by the North Carolina State Board of Education (2005), passed the amended Healthy Active Children Policy. This policy requires that schools provide a minimum of 30 minutes of moderate to vigorous physical activity for all K-8 students daily. This requirement can be achieved through a regular physical education class and/or through activities such as recess, dance, classroom-based activities such as Energizers, or other curriculum-based physical education programs. Also in 2005, a partnership effort of the N.C. Department of Public Instruction, N.C. Division of Public Health and N.C. Cooperative Extension Service published Move More: North Carolina’s Recommended Standards for Physical Activity in School. 30 The Move More School Standards serve as a tool for educators, parents, community leaders, industry representatives and policy makers to begin to create school environments that support physical activity.

ACTION RESEARCH QUESTIONS

This study aims to enhance the muscular strength and endurance of Bachelor of Physical Education students of Colegio de San Gabriel Archangel from school year 2021-2022, at home through PROJECT PASSED (Push up, Anaerobic, Sit up and Squat Exercise Daily).

Specifically, this research sought to answer the following questions:

1. What is the learner's level of physical fitness when exposed to PROJECT PASSED (Push up, Anaerobic, Sit up and Squat Exercise Daily)?
2. What are the learners’ muscular strength and endurance skills based on the pretest and posttest using the PROJECT PASSED (Push up, Anaerobic, Sit up and Squat Exercise Daily)?
3. Is there a significant difference that exists between pretest and posttest using the PROJECT PASSED (Push up, Anaerobic, Sit up and Squat Exercise Daily)?
4. What learning plan in Physical Education may be developed based on the findings of the study?

Methods

This study aims to assess the efficacy of PROJECT PASSED (Push up, Anaerobic, Sit-up and Squat Exercise Daily) as an innovation to improve learner’s Muscular Strength and Endurance. As we can see, many students’ fail to manage and balance their overall fitness amidst the pandemic. However, Despite of many obstacles and barriers, we want to help learners to achieve and focus on their health and physical fitness.

Concretely, this study will be using pretest-posttest as a procedure. This research is conducted on selected Colegio De San Gabriel Archangel BPE1-1 Students who will be the respondents of this study. We will use google meetings to monitor students' daily exercises and log exercise for them to be more productive and motivated. We will also provide a seminar/webinar so that learners can be even more clear about what they should and should not do. This will happen in one (1) week or (7 days) straight every morning since it's the best time for exercising.

Types of Research

This study uses pretest-posttest type of research to determine the efficiency of PROJECT PASSED. The pretest includes the participation of CDSGA Bachelor of Physical Education students in the physical activity program.

The activity program includes the muscular strength and endurance exercises that the learners will encounter. The posttest will be the final outcome of this research.

Proposed Innovation, Intervention and Strategy

Enhancing the muscular strength and endurance of the students, especially nowadays that we’re living and studying in the midst of a pandemic, is necessary. Regular

exercise and physical activity promote strong muscles and bones. It improves respiratory, cardiovascular health, and overall health.

Push-Up

- Push-ups require no equipment other than a hard surface. It is simple and effective bodyweight movement that can help increase strength in your upper body and core.

Anaerobic

- Anaerobic exercise requires immediate energy. Your body relies on stored energy sources, rather than oxygen, to fuel itself. Treadmill, Elliptical etc. are one of the example equipment needed.

Sit-Up

- Sit-ups are classic abdominal exercises. The curl-up test measures abdominal strength and endurance, equipment required: a flat, clean, cushioned surface, recording sheets, and pen.

Squat

- During squat exercises, you can use dumbbells, kettlebells, a barbell, or resistance bands.

Learners will develop their muscular strength and endurance, particularly if they provide a strategy at their home like browsing on social media about exercise, YouTube and downloading exercising apps in the play store. The said strategy will help develop learners and students by the provision of different strategies in enhancing student's muscular strength and endurance through PROJECT PASSED (Push up, Anaerobic, Sit up and Squat Exercise Daily).

Instruments

We, The Researchers, will make use of pretest-posttest to analyze the learner's level of Muscular Strength and Endurance and the outcome of these exercises. Through google meetings (online) we will be monitoring them daily to ensure that the students are doing the exercises properly. Also, an exercise log is a must. The selected fifteen (15) students, Bachelor of Physical education of Colegio De San Gabriel Arcangel participating in this project. As researchers, we will organize seminars to educate and inform participants on what they should do. This will happen in one (1) week or (7 days) straight. every morning since it's the best time for exercising.

Data Collection Procedure

In gathering the data, the researcher carried out a request letter to conduct the study noted by the Dean of

College of Education and research coordinator was sent to the Principal of the Junior High School (JHS) for approval and permits her to undertake the said study in Colegio De San Gabriel Arcangel.

After the permission was granted, the researcher sent the Informed Consent Form to all learners' parents/guardians for the conduct of the study. They were informed about the main objective and the main role of the researcher to the achievement of their children through the implementation of Project PASSED (Push-up, Anaerobic, Sit ups, and Squat Exercise Daily) in improving muscular strength, muscular endurance, and level of fitness. After the retrieval of the Informed Consent Form, the researcher personally administered the achievement test through pretest and posttest to the respondents of the study.

Another letter of request personally hand carried by the researcher to the school principal of the said school to officially execute the study. To ensure the confidentiality of the results, the researcher adhered to the ethical guidelines and issues related to gathering data procedure. Upon the completion of the relevant data, the researcher manually checked the achievement test in the form of pretest and posttest answered by the respondents.

Ethical Consideration

In compliance with the Data Privacy Act of 2012 and its Implementing Rules and Regulations, any personal information provided in response to the activity and disclosed will only be accessed, collected, and processed for the sole purpose of obtaining data for this study. Respondents will be taking part willingly and will have the option to leave at any moment. Respondents can contact the study's author(s) with any questions or issues they may have. If a copy of the study is requested, it will be made available.

Data Analysis

Data gathered from this study is shown in the following table:

1. Learner's level of physical fitness when exposed to PROJECT PASSED (Research Question 1), using a Day 1 to day 14 total counts of physical activity.
2. Learner's muscular strength and endurance skills (Research question 2), using a rating of modified counts of physical activity.
3. Significant difference that exists between pretest and posttest using the PROJECT PASSED (Research Question 3), by comparing the pretest and posttest.

ANALYSIS AND INTERPRETATION OF RESULTS

To effectively finish this study, it is intended to assess the data acquired in order to verify the hypothesis and answer the research questions. As mentioned in the previous

chapter, data is interpreted in a descriptive manner. This chapter contains the results of this study's analysis, presentation, and interpretation.

Table 1: PROJECT PASSED as enhancement activity at home to improve learner's muscular strength and endurance – Day 1 to Day 7 total counts of the activity

Student/Responder	Day 1 to Day 7 Total Counts of the Activity							
	Push-Up	Decision	Anaerobic	Decision	Sit-Up	Decision	Squat	Decision
R1	69	Excellent	88	Excellent	82	Excellent	51	Good
R2	58	Good	75	Excellent	73	Excellent	47	Good
R3	88	Excellent	88	Excellent	89	Excellent	67	Excellent
R4	84	Excellent	90	Excellent	70	Excellent	56	Good
R5	85	Excellent	106	Excellent	68	Excellent	62	Excellent
R6	48	Good	69	Excellent	73	Excellent	46	Good
R7	47	Good	74	Excellent	66	Excellent	54	Good
R8	103	Excellent	120	Excellent	82	Excellent	82	Excellent
R9	88	Excellent	96	Excellent	85	Excellent	67	Excellent
R10	38	Fair	32	Fair	73	Excellent	44	Good
R11	78	Excellent	61	Excellent	73	Excellent	75	Excellent
R12	46	Good	45	Good	55	Good	51	Good
R13	61	Excellent	55	Good	75	Excellent	75	Excellent
R14	64	Excellent	65	Excellent	78	Excellent	75	Excellent
R15	81	Excellent	75	Excellent	88	Excellent	90	Excellent

Note:

- Poor Below 25
- Fair 26-40
- Good 41-60
- Excellent 61 and above

This data reveals that in Push-Up 66.6% of the 15 respondents got High or Excellent rating, 26.6% got good, and 6.6% got fair. In Anaerobic 80% of the 15 respondents got Excellent rating, 13.33% got good, and 6.66% got fair. In Sit-Up 93.33% got Excellent rating, and 6.6% got good. In Squat 53.33% got Excellent, and 46.66% got good in rating.

Table 2: Collected data from pretest to posttest – learners' muscular strength and endurance skill

	Push-up	Rating	Anaerobic	Rating	Sit-up	Rating	Squat	Rating
Pretest	6.33	Low	8.33	Low	6.93	Low	5.93	Low
Posttest	15.6	High	18.13	High	18.13	High	16	High

Note: 10 and Below – Low
11 and above – High

Table 2 shows the collected data from pretest and posttest. The rating consists of Low (10 and below) and High (11 and above), this shows that pretest is low because it is the Day 1 of the exercise and the body's capabilities of a person is naturally low when it comes to starting a new physical activity. The posttest is high because of continuous work out done by the respondents.

Table 3: Assessment of Pretest and Posttest – Effectiveness of PROJECT PASSED as enhancement activity at home to improve learner's muscular strength and endurance

	Pretest	Posttest	Decision
Push-up	95	234	Ho is not accepted
Anaerobic	125	272	Ho is not accepted
Sit-Up	104	272	Ho is not accepted
Squat	89	240	Ho is not accepted

In the table 3, shows the results of pretest and posttests of the respondents of PROJECT PASSED (Push up, Anaerobic Sit up and Squat Exercise Daily). The researchers used unpaired t-test and come up with the calculated t-value of 11.7518 and the critical t-value of 2.4469. From this data, the researchers successfully rejected the null hypothesis and concluded that there is significant difference between pretest and posttest of the respondent using PROJECT PASSED.

The data shows that there's a lot of improvement in learners' muscular strength and endurance from day 1 to day 7 of the execution of the physical activity.

Learning Plan Developed Based on the Findings of the Study

Physical Education	
Objectives: <ul style="list-style-type: none"> - Understand the importance of being physically active - Improve their muscular strength and endurance while exercising - Demonstrate knowledge of components of physical fitness 	Assessment: <ul style="list-style-type: none"> - Push-up - Anaerobic - Sit-up - Squat Engages in moderate to vigorous physical activities for at least 60 minutes.
Materials: <ul style="list-style-type: none"> - Paper - Ballpen 	Content theme: <ul style="list-style-type: none"> - Fitness - Health

Table 4: The result of the pretest and posttest activity counts of respondents using unpaired t-test

P value= <0.0001 Calculated t Value= 11.7518 Critical t Value= 2.4469		
	Pretest	Posttest
Mean	103.25	254.5
SD	15.758	20.3552
SEM	7.878	10.1776
95% CI of Mean	(78.18) - (128.32)	(222.11) - (286.89)
N	4	4

In table 4, shows the P value is 0.0001, the calculated t value is 11.7518 and the critical t value is 2.4469. The results shows that there is significant difference among the pretest and posttest activity counts of the respondents.

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

Based on the data analyzed in the preceding chapter, this chapter covers the summary, findings, conclusions, and suggestions. This study aims to enhance the learners' muscular strength and endurance and to create a learning environment in which teachers and learners are the main beneficiaries and to provide students with the essential knowledge to understand the value of being physically active on our bodies.

Summary

This study aims to enhance the muscular strength and endurance of Bachelor of Physical Education students of Colegio de San Gabriel Arcangel from school year 2021-2022, at home through PROJECT PASSED (Push up, Anaerobic, Sit up and Squat Exercise Daily). This study uses pretest-posttest type of research to determine the efficiency of PROJECT PASSED. The pretest includes the participation of CDSGA Bachelor of Physical Education students in the physical activity program.

The activity program includes the muscular strength and endurance exercises that the learners will encounter. The posttest will be the final outcome of this research. The respondents of the study were purposively selected as members of the research study.

The research's main objective is to assess the effectiveness of the 'Project PASSED (Push up, Anaerobic, Sit up and Squat Exercise Daily)'.

The scope is confined to 15 male and female Bachelor of Physical Education College Students of Colegio de San Gabriel Arcangel, enrolled in the academic year 2021-2022. The researchers will provide a webinar on the relevance of improving muscular strength and endurance for our health. And after the researchers discussed the instructions on how to execute the daily exercises, the researchers will add each respondent to the chat group (for daily monitoring) where the daily record of physical activity (exercise log) can be sent for 1 week (7 days).

Furthermore, the purpose of this study is to identify students' physical activity skills using PROJECT PASSED. Doing these, the researchers will determine the level of fitness before and after using the enhancement activity.

Findings

The researchers found out that the level of fitness can be higher through various physical activities like push-up, anaerobic, sit-up and squat. It only proves that PROJECT PASSED (Push-up, Anaerobic, Sit-up, and Squat Exercise Daily) is effective as an enhancement activity at home to improve learners' muscular strength and endurance. According to the results of pretest and posttest there is a

significant difference happens during the activity, as for the respondents from Bachelor of Physical Education 1 improve their counts of the activity day after day.

However, the researchers successfully rejected the null hypothesis and concluded that there is significant difference between pretest and posttest of the respondent using PROJECT PASSED as an enhancement activity at home to improve the learners' muscular strength and endurance.

Conclusions

1. PROJECT PASSED (Push-up, Anaerobic, Sit-up, and Squat Exercise Daily) is effective as an enhancement activity at home to improve learners' muscular strength and endurance.
2. 73% of the 15 respondents got Excellent rating in the overall results of the activity.
3. There is significant difference between pretest and posttest of the respondent using PROJECT PASSED.

Recommendations

1. Plan a program wherein learners can engage a physical activity in the new normal setting or at home.
2. Make physical activity opportunities more locally accessible.
3. Make the program enjoyable and fun so that the learners will engage not just for being physically healthy but also for being mentally healthy.
4. Teach the basics and proper ways of executing the exercises.
5. To assess the learners' knowledge about the program it is necessary to have them do it by themselves.
6. Inform students of the benefits they may get if the activity successfully done.

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